

EMILY L. GODIN

Geoscience Education PhD Student

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PROFESSIONAL BIO

I am a geoscience education researcher, earth science educator, and geomorphologist. My research interests are in the design and implementation of geomorphology virtual field experiences, and stream channel incision in southeastern Arizona watersheds.

As an educator, I push to design equitable and transformative geoscience lessons and experiences that inspire the next generation of students to develop meaningful connections with the natural world and utilize new technologies that define the 21st century.

EDUCATION

Arizona State University

Doctor of Philosophy in Geoscience - Geoscience Education
2023 - present

Northern Arizona University

Bachelor's Degree in Secondary Education - Earth Science with Honors
2018 - 2023

Northern Arizona University

Bachelor's Degree in Geology with Honors
2018 - 2022

CERTIFICATIONS

Earth Science Teacher - Secondary

Arizona Department of Education
2023

CITI Program

Northern Arizona University (2021)
Arizona State University (2023)

RESEARCH EXPERIENCE

Graduate Research Assistant

Arizona State University | 2023 - present

- Primary Projects:
 - Shaping the Surface: Integrating Geological and Planetary Sciences in a New Virtual Field Experience (2023-2025)
 - Create and manage a curriculum and traditional research project to design and implement a virtual field experience that (1) effectively meets the needs of faculty and students in undergraduate planetary science and geoscience courses, and (2) defines the impact VFE design elements have on students' perceived sense of place, spatial thinking skills, and interest in science.
 - Enhancing Field Skills and Discourse Through Geomorphology Virtual Field Experiences (2024-2028)
 - Create and manage an implementation and traditional research project to (1) create 2-3 virtual versions of in-person geomorphology field trips and compare how their effectiveness changes as a multi-use activity and resource versus a traditional single-use entity, and (2) define how the incorporation of field discourse in a VFE compares to authentic field discourse in an in-person field experience?
- Secondary Project:
 - Identify what factors are inhibiting channel incision in the Pinaleno Mountains post basin and range extension (2024-2026)

Undergraduate Research Positions

Northern Arizona University | 2020 - 2024

- Climate Curriculum Implementation in Flagstaff Middle Schools (PI)
 - Created and led an individual research project studying the climate change curriculum in Flagstaff middle schools and published a first-authored paper in NSTA's Science Scope journal.
 - Individually monitored budget, compiled and submitted documents for IRB approval, collected, analyzed, and presented results at NAU's annual undergraduate symposium, created, and maintained research website.
- PLANETS (Research Assistant)
 - Managed and communicated with participants around the country who are beta-testing planetary curriculum for out-of-school time (<https://planets-stem.org>).
 - Compiled and disseminated beta-testing feedback reports to be shared with the design team to make improvements to the curriculum prior to publication.
- STEM Education Dept. STICH Scholars Program (Research Assistant)
 - STEM-Focus Schools for the Future: Compiled a collection of phenomena-based STEM lessons and video demonstrations of sample lessons to support Arizona K-8 schools (2021-2022)
 - Polar Explorer: Reviewed media and other instructional material to highlight the ways the materials can more effectively reach the target student population (2022-2023)

TEACHING EXPERIENCE

Graduate Teaching Assistant

ASU School of Earth and Space Exploration | August 2024 - present

- Session A - GLG 101/103 icourse: Answered students' questions and concerns regarding assignments. Provided detailed explanations and resources to assist them in comprehending the material. Communicate with fellow TA's.
- Session B - GLG 102/104 ocourse: Grade students' open-response questions in weekly quizzes. Communicate with fellow TA's on the rubric to maintain fairness in grading consistency.
- Session C - GLG 101 lecture: Attend lecture classes and hold office hours for students to provide support and further explanation of course material.

High School Earth Science Teacher

Flagstaff Unified School District | Jan 2023 - May 2023

- Created inclusive and accessible curriculum for high school earth science students: created and designed activities spanning single lessons to multi-week units, adapted teaching styles and strategies to meet the needs of all learners.
- Managed a classroom of 35+ students with varying abilities and exceptionalities over four class periods and collaborated with classroom aids and co-workers.

CURRICULUM DEVELOPMENT EXPERIENCE

SESE TA Training Committee

ASU School of Earth and Space Exploration | June 2024 - present

- Helped develop the SESE TA Training Canvas course and design the 3-hour TA training workshop for the Fall 2024 semester.
- Working to expand the TA training to an option 8-week course to better support new TA's in SESE, and provide more time to explore key skills and teaching practices.

Developing New GLG 103 Lab Curriculum

ASU School of Earth and Space Exploration | September 2024 - present

- Helping Jackie Giblin with her space grant project to create new labs for the GLG 103 course (online and in-person) that better meet the needs and interests of today's students.

PUBLICATIONS

Godin, E. L., & Johanson, J. (2024). Unlocking the Power of Emotional Connections: Strategies for Teaching Climate Change in Middle School. *Science Scope*, 47(5), 15–23. <https://doi.org/10.1080/08872376.2024.2385305>

PRESENTATIONS

Godin, E. (2024, October). Shaping the Surface: Integrating Geological and Planetary Sciences in a New Virtual Field Experience. Poster presented at the Geological Society of America Connects conference in Anaheim, CA.

Godin, E. (2023, October). A Case Study Analyzing Climate Education in two Flagstaff, AZ Middle Schools. Oral presentation at the Geological Society of America Connects conference in Pittsburgh, PA.

Godin, E., Huntzinger, D., Mead, C., Thompson, L., Bruce, G., Anbar, A., Mack, M., Schaefer, K., Leshyk, V., and Taylor, W. (2023, April). Creating an immersive virtual learning environment to communicate the impacts of thawing permafrost in the Arctic. Poster presented at the NAU Undergraduate Research Symposium in Flagstaff, AZ.

Godin, E., Johanson, J. (2023, April). Comparing five 6th grade programs showed a correlation between students' depth of understanding and their potential to overcome psychological barriers of climate change. Poster presented at the NAU Undergraduate Research Symposium in Flagstaff, AZ.

Godin, E., Johanson, J. (2023, April). Comparing five 6th grade programs showed a correlation between students' depth of understanding and their potential to overcome psychological barriers of climate change. Poster presented at the NAU Hooper Undergraduate Research Award Symposium in Flagstaff, AZ.

Godin, E. (2023, April). A case study analyzing climate change curriculum implementation in Flagstaff middle schools. Oral presentation at the National Conference on Undergraduate Research in Eau Claire, WI.

Godin, E. (2022, December). An analysis of climate change curriculum implementation in Flagstaff middle schools. Oral presentation at the NAU Honors College Symposium in Flagstaff, AZ.

Godin, E., Johanson, J. (2022, April). Comparing curriculum implementation in two 6th grade programs showed a difference in the depth of students' understanding of climate change. Poster presented at the NAU Undergraduate Research Symposium in Flagstaff, AZ.

Godin, E., Johanson, J. (2022, April). Comparing curriculum implementation in two 6th grade programs showed a difference in the depth of students' understanding of climate change. Poster presented at the NAU Hooper Undergraduate Research Award Symposium in Flagstaff, AZ.

Godin, E. (2022, April). Communicating climate change to middle school students: overcoming psychological barriers. Oral presentation at the NAU College of Education's annual Educate2Act conference in Flagstaff, AZ.

Godin, E. (2021, December). The influence of climate change misinformation on the American Education System and how this poses a problem for solving the climate crisis. Oral presentation at the NAU Honors College Symposium in Flagstaff, AZ.

RECOGNITIONS

- ASU School of Earth and Space Exploration First-Year-Fellowship Recipient (2023)
- National Conference on Undergraduate Research Quick Pitch Winner (2023)
- Council on Undergraduate Research Education Division Undergraduate Research Award recipient (2023)
- Vesto Melvin Slipper Award recipient (2022)
- AmeriCorps Research Award recipient (2022)
- Two-time Hooper Undergraduate Research Award recipient (2021; 2022)
- Outstanding Undergraduate in Geology (2021)
- Undergraduate Perfect Pitch Competition Winner (2021)

PROFESSIONAL SERVICE

GEM Environmental NFP Board Member

GEM Environmental NFP Director of Scholarships (2022-2024)

Geological Society of America Geoscience Education Division Student Representative (2022-2024)

AFFILIATIONS

Geological Society of America (GSA)- Member since 2022

National Science Teachers Association (NSTA)- Member since 2022

National Association of Geoscience Teachers (NAGT)- Member since 2023

Association for Women Geoscientists (AWG)- Member since 2024

Arizona Geological Society (AGS) - Member since 2024